CLAIMS

WHAT IS CLAIMED IS:

1. A transmitter for use in a vehicle, comprising:

a battery;

a transmission device powered by the battery, wherein the transmission device has an associated nominal voltage;

an energy storage device that selectively supplies power to the transmission device; and

a processor in communication with to the battery, the transmission device, and the energy storage device, wherein the processor allows the energy storage device to charge if the processor predicts that a battery voltage will fall below the nominal voltage during operation of the transmission device.

2. The transmitter of claim 1, wherein the battery is a lithium battery.

3. The transmitter of claim 1, wherein the transmission device is a phase locked loop device.

4. The transmitter of claim 1, wherein the energy storage device is a capacitor.

5. The transmitter of claim 1, wherein the processor predicts that the battery voltage will fall below the nominal voltage if the battery voltage falls below a voltage threshold.

6. The transmitter of claim 5, wherein the voltage threshold is equal to the nominal value.

7. The transmitter of claim 5, wherein the voltage threshold is greater than the nominal value.

8. The transmitter of claim 1, further comprising a temperature sensor in communication with the processor.

9. The transmitter of claim 8, wherein the temperature sensor is in communication with a temperature sensor portion of the processor.

10. The transmitter of claim 8, wherein the processor predicts that the battery voltage will fall below the nominal voltage if a temperature sensed by the temperature sensor falls below a temperature threshold.

11. The transmitter of claim 8, wherein the processor predicts that the battery voltage will fall below the nominal voltage if a temperature sensed by the temperature sensor falls below a temperature threshold and if the battery voltage falls below a voltage threshold.

12. The transmitter of claim 8, wherein the processor predicts that the battery voltage will fall below the nominal voltage if a value based on the temperature and the battery voltage fall below a threshold calculated as a function of the temperature and the battery voltage.

13. A method of transmitting a signal via a transmission device having an associated nominal voltage and being powered at least in part by a battery, comprising:

predicting if a battery voltage will fall below the nominal voltage during operation of the transmission device; and

supplementing power from the battery with power from an energy storage device if the predicting step indicates the battery voltage will fall below the nominal voltage.

14. The method of claim 13, further comprising charging the energy storage device if the predicting step indicates the battery voltage will fall below the nominal voltage, wherein the supplementing step comprises releasing energy from the energy storage device.

15. The method of claim 13, wherein the predicting step predicts that the battery voltage will fall below the nominal voltage if the battery voltage falls below a voltage threshold.

16. The method of claim 15, wherein the voltage threshold is equal to the nominal value.

17. The method of claim 15, wherein the threshold is greater than the nominal value.

18. The method of claim 13, wherein the predicting step predicts that the battery voltage will fall below the nominal voltage if a sensed temperature falls below a temperature threshold.

19. The method of claim 13, wherein the predicting step predicts that the battery voltage will fall below the nominal voltage if a sensed temperature sensed falls below a temperature threshold and if the battery voltage falls below a voltage threshold.

20. The method of claim 13, wherein the processor predicts that the battery voltage will fall below the nominal voltage if a value based on a sensed temperature and the battery voltage fall below a threshold calculated as a function of the sensed temperature and the battery voltage.